[redacted]

#588

ISEE 1
1 MINUTE AVERAGED MAGNETIC FIELD DATA
77-102A-04Q

ISEE 2
1 MINUTE AVERAGED MAGNETIC FIELD DATA
77-102B-04M

ISEE 1 & 2
MAGNETOMETER
MAGNETOSPHERIC B-FIELD WITH IMF, N, V, T
77-102A-04U & 77-102B-04Q

[redacted]

REQ AGENT	RAND NO.	ACQ. AGENT
GWM	V0355	HKH
GWM	V0365	HKH

ISEE-1

FLUXGATE MAGNETOMETER ONE-MINUTE AVERAGED MAGNETIC FIELD DATA

77-102A-04Q

THIS DATA SET CONSISTS OF 61 MAGNETIC TAPES. THE TAPES ARE ASCII, 1600 BPI, AND 9-TRACK. ALL TAPES CONTAIN 10 FILES. THE D AND C TAPE NUMBERS ARE AS FOLLOWS:

D#	C#	TIME SPAN
D-74238	C-26317	01/13/80 - 02/06/80
D-74239	C-29189	02/06/80 - 03/01/80
D-74240	C-29190	03/01/80 - 03/24/80
D-74241	C-26318	03/24/80 - 04/17/80
D-74242	C-29191	04/17/80 - 05/11/80
D-74243	C-29192	05/11/80 - 06/04/80
D-74244	C-26319	06/04/80 - 06/28/80
D-74245	C-29193	06/28/80 - 07/22/80
D-74246	C-29194	07/22/80 - 08/15/80
D-74247	C-26320	08/15/80 - 09/08/80
D-74248	C-29195	09/08/80 - 10/02/80
D-74249	C-29196	10/02/80 - 10/26/80
D-74250	C-26321	10/26/80 - 11/18/80
D-74251	C-29197	11/18/80 - 12/12/80
D-74252	C-29198	12/12/80 - 01/05/81
D-74253	C-26322	01/05/81 - 01/29/81
D-74254	C-29199	01/29/81 - 02/22/81
D-74255	C-29200	02/22/81 - 03/18/81
D-74256	C-26323	03/18/81 - 04/11/81
D-74257	C-29201	04/11/81 - 05/05/81
D-74258	C-29221	05/05/81 - 05/29/81
D-74259	C-26324	05/29/81 - 06/22/81
D-74260	C-29222	06/22/81 - 07/15/81
D-74261	C-29223	07/15/81 - 08/08/81
D-74262	C-26325	08/08/81 - 09/01/81
D-74263	C-29224	09/01/81 - 09/25/81
D-74264	C-29225	09/25/81 - 10/19/81
D-74265	C-26326	10/19/81 - 11/12/81
D-74266	C-29226	11/12/81 - 12/06/81
D-74267	C-29227	12/06/81 - 12/30/81

D#	C#	TIME SPAN
D-74773	C-26448	12/30/81 - 01/23/82
D-74774	C-26449	01/23/82 - 02/16/82
D-74775	C-26467	02/16/82 - 03/11/82
D-74776	C-26468	03/11/82 - 04/04/82
D-74777	C-26469	04/04/82 - 04/28/82
D-74778	C-26470	04/28/82 - 05/22/82
D-74779	C-26471	05/22/82 - 06/15/82
D-74780	C-26472	06/15/82 - 07/09/82
D-74781	C-26473	07/09/82 - 08/02/82
D-74782	C-26474	08/02/82 - 08/26/82
D-74783	C-26475	08/26/82 - 09/19/82
D-74784	C-26476	09/19/82 - 10/13/82
D-74785	C-26477	10/13/82 - 11/05/82
*D-74786		11/05/82 - 11/29/82
D-74787	C-26487	11/29/82 - 12/23/82
D-74788	C-26478	12/23/82 - 01/16/83
D-74789	C-26479	01/16/83 - 02/09/83
D-74790	C-26480	02/09/83 - 03/05/83
D-74791	C-26481	03/05/83 - 03/29/83
D-74792	C-26482	03/29/83 - 04/22/83
D-74793	C-26483	04/22/83 - 05/16/83
D-74794	C-26484	05/16/83 - 06/09/83
D-74795	C-26485	06/09/83 - 07/02/83
D-74796	C-26486	07/02/83 - 07/26/83
D-74882	C-26577	07/26/83 - 08/19/83
D-74883	C-26578	08/19/83 - 09/12/83
D-74884	C-26579	09/12/83 - 10/06/83
D-74885	C-26580	10/06/83 - 10/30/83
D-74886	C-26581	10/30/83 - 11/23/83
D-74887	C-26582	11/23/83 - 12/17/83
D-74888	C-26583	12/17/83 - 01/10/84

*BAD TAPE..NEEDS REPLACEMENT..

INTERNATIONAL SUN-EARTH EXPLORER MAGNETOMETER SUMMARY TAPE FORMAT AND CONTENTS

RICHARD ELPHIC
HARRY HERBERT
UNIVERSITY OF CALIFORNIA, LOS ANGELES
INSTITUTE OF GEOPHYSICS AND
PLANETARY PHYSICS
MAY 6, 1986

GENERAL DESCRIPTION

This document describes the format used by the ISEE-1 and ISEE-2 magnetometer group for the submission of its data to the National Space Science Data Center (NSSDC).

The overall specification is that all data will be coded into text (ASCII) data format, and written onto standard 1/2 inch 1600-bpi 9-track magnetic tapes. The logical record length will be fixed for all tapes at 1,000 bytes. The physical blocksize for all tapes will be fixed at 10,000 bytes. Each physical block contains ten logical records. Each magnetic tape contains 10 files of data seperated by a single end-of-file mark. The end-of-data is indicated by two successive end-of-file marks at the end of the tenth data file.

Each tape file contains magnetometer data and associated ephemeris data from one of the spacecraft for one orbit, an orbit being measured from perigee to perigee. Each magnetic tape contains 10 orbits of data. The data provided are one minute averages centered on each minute.

The external labels on the magnetic tape contain the following information: Name of the spacecraft and experiment; start and stop dates of the data on this tape; the density (1600-bpi) and number of tracks (9) at which the tape was recorded; the physical blocksize and the logical record length used in writing the tape; an estimate of the amount of tape used; the production date of the tape; and, a name and telephone number of the individual responsible for the tape.

The submission format is self-defining in the sense that the first three records in each tape file define the data parameters, value representations, and missing data (fill) indicators. The first logical record of each tape file defines the order in which the variables appear in the subsequent data records. The second logical record of each tape file will contain a FORTRAN-compatible format list describing the field sizes and representations of each data value in the order defined in record 1. This format may be used to decode all subsequent records in the tape file. The third logical record of each tape file defines a unique value associated with filler (missing) data for all variable fields. It is formatted according to the format used in record 2, and is immediately followed by the start of actual data records (record 4 and beyond). The last physical block of each tape file may contain one or more logical records of fill values so that all physical blocks are of the same size.

Note: Appendix 2 contains an example of a simple program to read this tape using ANSI standard FORTRAN 77.

FORMAT OF THE DATA RECORDS

Record 1: The FORTRAN format used is (I4,100(1X,A8),A96) where the I4 is the number of data items in each record (always equal to 100); the 100(1X,A8) are the name and order of the variables that appear in the subsequent records; the A96 contains source institution and creation date information. See appendix 1 for a description of each data variable. The following is the FORTRAN-DATA statement that creates this record:

```
 DATA RECORD1/
1' 100',
2' YR.DOY   SEC      ORBIT    CRAFT    BT       BX SC    ',
3' BY SC    BZ SC    SDX      SDY      SDZ      SDT      ',
4' SDC      BX GSM   BY GSM   BZ GSM   BX DIP   BY DIP   ',
5' BZ DIP   B        B/BO     BINT     BXIM GSM BYIM GSM',
6' BZIM GSM BINTEXT  BXIE GSM BYIE GSM BZIE GSM NLAT GEO',
7' NLON GEO SLAT GEO SLON GEO LONG GEO LAT GEO  R        ',
8' X GSE    Y GSE    Z GSE    X GSM    Y GSM    Z GSM    ',
9' ZNS GSM  TILT     L        LT       MLAT     SES      ',
X' PHI      SPIN     SLNG GSM SLT GSM  SLNG GSE SLT GSE ',
1' VX GSM   VY GSM   VZ GSM   V        DVX GSM  DVY GSM  ',
2' DVZ GSM  DV       DX GSM   DY GSM   DZ GSM   DX GSE   ',
3' DY GSE   DZ GSE   DR       NMPX GSE NMPY GSE NMPZ GSE',
4' MPS      NSX GSE  NSY GSE  NSZ GSE  SS       EM22     ',
5' EM23     EM32     EM33     IE11     IE12     IE13     ',
6' IE21     IE22     IE23     IE31     IE32     IE33     ',
7' SE11     SE12     SE13     SE21     SE22     SE23     ',
8' SE31     SE32     SE33     QUAL                       ',
9' ISEE MAGNETOMETER SUMMARY TAPE FROM UCLA-IGPP        ',
X' CREATED - DD MMM YYYY  '/
```

Record 2: This record contains the format in which all succeeding records are written. The following is the FORTRAN-DATA statement that creates this record:

```
 DATA RECORD2/
1'(58F10.2,4F10.5,7F10.2,2(3F10.5,F10.2),23F10.5)                ',
2'                                                               ',
3'                                                               ',
4'                                                               ',
5'                                                               ',
6'                                                               ',
7'                                                               ',
8'                                                               ',
9'                                                               ',
X'                                                               ',
1'                                                               ',
2'                                                               ',
3'                                                               ',
4'                                                               ',
5'                                                               ',
6'                                                               ',
7'                                                  '/
```

Record 3: This record contains a fill value in each data value location. This value will be used by any program reading the data to identify fill data in subsequent input records. NOTE: The value for seconds of the day will be set to the fill value (0.00) at the start of each new day, only when the value for YR.DOY is set to the fill value (0.00) should the time value be considered flagged. The following is the FORTRAN-DATA statement that creates this record:

```
 DATA RECORD3/
1'      0.00      0.00      0.00      0.00 999999.00 999999.00',
2' 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00',
3' 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00',
4' 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00',
5' 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00',
6' 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00',
7' 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00',
8' 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00',
9' 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00',
X' 999999.00 999999.00 999999.00 999999.00 999.00000 999.00000',
1' 999.00000 999.00000 999999.00 999999.00 999999.00 999999.00',
2' 999999.00 999999.00 999999.00 999.00000 999.00000 999.00000',
3' 999999.00 999.00000 999.00000 999.00000 999999.00 999.00000',
4' 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000',
5' 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000',
6' 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000',
7' 999.00000 999.00000 999.00000 999.00000'/
```

Record 4 to n : These records contain the date, time, orbit, spacecraft number and data values. This data is centered on each whole minute. As can be inferred from the following example, the date is coded as YEAR, DAY OF YEAR (1-366) with 19 included in the year. The time is in seconds of the day, orbit number and spacecraft (1 or 2) are self-explanatory. The following is a sample data record for ISEE-2, orbit 91, day of year 145 (May 25), year 1978, second of day 71460.00 (19:51:00.000):

```
---------1---------2---------3---------4---------5---------6
1978145.00  71460.00     91.00      2.00    255.71     20.73
   -254.81      5.43       .33       .03       .03       .02
       .33     20.44   -242.33    -79.03     17.19      5.73
      8.09    236.76      -.01    229.26      -.87   -216.04
    -76.73    246.89     13.88   -228.72    -91.93     65.57
    312.31 999999.00 999999.00    -30.62     36.33      5.91
      1.42      5.27      2.27      1.42      4.11      3.99
      -.85     28.33     -1.00     18.60     45.15     76.14
     44.16      3.03    -98.57     70.28    155.08     86.82
     -1.12      2.74      2.67      3.99   -.02493   -.05716
   -.05778    .08501   -417.56    833.88    786.10   -417.56
   1059.10    437.75   1219.70    .55012    .76698    .33033
    727.20    .69543    .65999    .28425    533.04    .93449
   -.35600    .35600    .93449    .43464    .82627    .35829
   -.90060    .39876    .17292   0.00000   -.39784    .91746
    .99874   0.00000   -.05027    .00118    .99973    .02335
    .05026   -.02338    .99846   1.00000
```

ACKNOWLEDGEMENTS

This tape format and document are modifications of the following document: "PIONEER VENUS MISSION, INSTRUCTIONS FOR DATA SUBMISSIONS TO THE NATIONAL SPACE SCIENCE DATA CENTER, A COMMITTEE REPORT", from Roger A. Craig at NASA Ames Research Center, August 11, 1983.

APPENDIX 1 - DATA VARIABLE DESCRIPTIONS

###	NAME	UNITS	DESCRIPTION
001	YR.DOY		(19xx * 1000.0) + Day Of Year
002	SEC		Seconds of the day
003	ORBIT		ISEE orbit number
004	CRAFT		ISEE spacecraft number (1 or 2)
005	BT	GAMMAS	60 second average of total field
006	BX SC	GAMMAS	60 second average of Bx in spacecraft coordinates
007	BY SC	GAMMAS	60 second average of By in spacecraft coordinates
008	BZ SC	GAMMAS	60 second average of Bz in spacecraft coordinates
009	SDX	GAMMAS	Standard deviation of Bx values
010	SDY	GAMMAS	Standard deviation of By values
011	SDZ	GAMMAS	Standard deviation of Bz values
012	SDT	GAMMAS	Standard deviation of total field
013	SDC	GAMMAS	SQRT(SDx**2 + SDy**2 + SDz**2 - SDt**2)
014	BX GSM	GAMMAS	Bx in GSM coordinates
015	BY GSM	GAMMAS	By in GSM coordinates
016	BZ GSM	GAMMAS	Bz in GSM coordinates
017	BX DIP	GAMMAS	Bx minus model(IGRF 75+OP 77) in dipole coord.
018	BY DIP	GAMMAS	By minus model(IGRF 75+OP 77) in dipole coord.
019	BZ DIP	GAMMAS	Bz minus model(IGRF 75+OP 77) in dipole coord.
020	B	GAMMAS	Total field (model)
021	B/BO	GAMMAS	Ratio of local total field to model field at equator
022	BINT	GAMMAS	Model internal field - total
023	BXIM GSM	GAMMAS	Model internal field - Bx in GSM coordinates
024	BYIM GSM	GAMMAS	Model internal field - By in GSM coordinates
025	BZIM GSM	GAMMAS	Model internal field - Bz in GSM coordinates
026	BINTEXT	GAMMAS	Model internal+external field - total
027	BXIE GSM	GAMMAS	Model internal+external field - Bx in GSM coord.
028	BYIE GSM	GAMMAS	Model internal+external field - By in GSM coord.
029	BZIE GSM	GAMMAS	Model internal+external field - Bz in GSM coord.
030	NLAT GEO	DEGREES	North geographic latitude of field intercept
031	NLON GEO	DEGREES	North geographic longitude of field intercept
032	SLAT GEO	DEGREES	South geographic latitude of field intercept
033	SLON GEO	DEGREES	South geographic longitude of field intercept
034	LONG GEO	DEGREES	Sub-spacecraft geographic longitude
035	LAT GEO	DEGREES	Sub-spacecraft geographic latitude
036	R	RE	Radial distance to spacecraft (geocentric)
037	X GSE	RE	GSE X position (Re)
038	Y GSE	RE	GSE Y position (Re)
039	Z GSE	RE	GSE Z position (Re)
040	X GSM	RE	GSM X position (Re)
041	Y GSM	RE	GSM Y position (Re)
042	Z GSM	RE	GSM Z position (Re)
043	ZNS GSM	RE	Z position of nominal Russell/Brody neutral sheet
044	TILT	DEGREES	Dipole tilt angle
045	L		L parameter
046	LT	HR	Local time of spacecraft
047	MLAT	DEGREES	latitude of spacecraft from magnetic equator
048	SES	DEGREES	Sun-Earth-Satellite angle
049	PHI	DEGREES	Clock angle from Y GSM axis (positive toward +Z GSM)
050	SPIN	SEC	Spin period of spacecraft
051	SLNG GSM	DEGREES	spacecraft longitude in GSM
052	SLT GSM	DEGREES	spacecraft latitude in GSM
053	SLNG GSE	DEGREES	spacecraft longitude in GSE
054	SLT GSE	DEGREES	spacecraft latitude in GSE
055	VX GSM	KM/SEC	X component of velocity in GSM (km/s)
056	VY GSM	KM/SEC	Y component of velocity in GSM (km/s)
057	VZ GSM	KM/SEC	Z component of velocity in GSM (km/s)
058	V	KM/SEC	Total velocity

###	NAME	UNITS	DESCRIPTION
059	DVX GSM	KM/SEC	X component of vel. in GSM relative to other craft
060	DVY GSM	KM/SEC	Y component of vel. in GSM relative to other craft
061	DVZ GSM	KM/SEC	Z component of vel. in GSM relative to other craft
062	DV	KM/SEC	Total relative velocity
063	DX GSM	KM	Separation of craft in X GSM (ISEE-2 to ISEE-1)
064	DY GSM	KM	Separation of craft in Y GSM (ISEE-2 to ISEE-1)
065	DZ GSM	KM	Separation of craft in Z GSM (ISEE-2 to ISEE-1)
066	DX GSE	KM	Separation of craft in X GSE (ISEE-2 to ISEE-1)
067	DY GSE	KM	Separation of craft in Y GSE (ISEE-2 to ISEE-1)
068	DZ GSE	KM	Separation of craft in Z GSE (ISEE-2 to ISEE-1)
069	DR	KM	Total separation of spacecraft
070	NMPX GSE		X component GSE of model normal to magnetopause
071	NMPY GSE		Y component GSE of model normal to magnetopause
072	NMPZ GSE		Z component GSE of model normal to magnetopause
073	MPS	KM	Component of separation vector along this normal
074	NSX GSE		X component GSE of model normal to bow shock
075	NSY GSE		Y component GSE of model normal to bow shock
076	NSZ GSE		Z component GSE of model normal to bow shock
077	SS	KM	Component of separation vector along this normal
078	EM22		Rotation matrix from GSE to GSM
079	EM23		(1 0 0)
080	EM32		(0 EM22 EM23)
081	EM33		(0 EM32 EM33)
082	IE11		
083	IE12		Rotation matrix from geocentric inertial (GEI)
084	IE13		to geocentric solar ecliptic (GSE)
085	IE21		
086	IE22		(IE11 IE12 IE13)
087	IE23		(IE21 IE22 IE23)
088	IE31		(IE31 IE32 IE33)
089	IE32		
090	IE33		
091	SE11		
092	SE12		Rotation matrix from spacecraft coordinates to GSE
093	SE13		
094	SE21		(SE11 SE12 SE13)
095	SE22		(SE21 SE22 SE23)
096	SE23		(SE31 SE32 SE33)
097	SE31		
098	SE32		
099	SE33		
100	QUAL		Quality flag

```
FTN77
      PROGRAM TAPE
C-----------------------------------------------------------------------
C  Purpose:     Sample program to read the ISEE summary data tape.
C  Source:      UCLA - Institute of Geophysics and Planetary Physics.
C  From:        Richard Elphic (213-825-5097)
C  Programmer:  Harry Herbert (213-206-6073)
C  Date:        May 6, 1986
C-----------------------------------------------------------------------
      CHARACTER*1000 RECORD(10)
      CHARACTER*8    LABEL(100)
      CHARACTER*1000 FORM
      REAL*4         FLAG(100)
      REAL*4         DATA(100)
      INTEGER*2      ITEMS
      INTEGER*2      IBLOCK
      INTEGER*2      TAPELU
      LOGICAL        FIRST
      LOGICAL        BADT
C
C  BE SURE TO PROPERLY DEFINE THE MAGNETIC TAPE LU.
C
      TAPELU=8
      IBLOCK=0
      FIRST=.TRUE.
   10 IBLOCK=IBLOCK+1
      READ(UNIT=TAPELU,FMT=20,ERR=10,END=100) RECORD
   20 FORMAT(10A1000)
      K=1
C
      IF(FIRST) THEN
        READ(UNIT=RECORD(1),FMT=30) ITEMS,LABEL,COMMENT
   30   FORMAT(I4,100(1X,A8),A96)
        FORM=RECORD(2)
        READ(UNIT=RECORD(3),FMT=FORM) FLAG
        K=4
        FIRST=.FALSE.
      ENDIF
C
      DO 90 I=K,10
        READ(UNIT=RECORD(I),FMT=FORM) DATA
        BADT=.FALSE.
        IF(DATA(1).EQ.FLAG(1)) BADT=.TRUE.
        IF(DATA(3).EQ.FLAG(3)) BADT=.TRUE.
        IF(DATA(4).EQ.FLAG(4)) BADT=.TRUE.
        IF(BADT) THEN
          WRITE(UNIT=1,FMT=60) I,IBLOCK
   60     FORMAT('BAD TIME AT RECORD',I3,' BLOCK',I5)
          GO TO 90
        ENDIF
        DO 70 J=5,100
          IF(DATA(J).EQ.FLAG(J)) WRITE(UNIT=1,FMT=80) LABEL(J),I,IBLOCK
   70   CONTINUE
   80   FORMAT(1A8,' HAS A FLAGGED VALUE AT RECORD',I3,' BLOCK',I5)
   90 CONTINUE
C
      GO TO 10
  100 STOP
      END
```

77-1028-04M

REQ. AGENT	RAND NO.	ACQ. AGENT
GLS	V0285	HKH
SAR	V0351	HKH
GWM	V0361	HKH

ISEE 2

1 MINUTE AVERAGED MAGNETIC FIELD DATA

77-102B-04M

THIS DATA SET CATALOG CONSISTS OF 70 MAGNETIC TAPES. THE TAPES ARE 1600 BPI, 9 TRACK, ASCII FORMATTED AND CONTAIN 10 FILES EACH OF DATA, WITH THE EXCEPTION OF D-74297, WHICH CONTAINS 40 FILES OF DATA. THE TAPES WERE CREATED ON AN IBM 3081 COMPUTER. THE D AND C NUMBERS ALONG WITH THE TIME SPANS ARE AS FOLLOWS:

D#	C#	TIME SPAN
D-65441	C-24677	10/22/77 - 11/15/77
D-73061	C-26265	11/15/77 - 12/09/77
D-73062	C-26266	12/09/77 - 01/02/78
D-73063	C-26267	01/02/78 - 01/26/78
D-73064	C-26268	01/26/78 - 02/19/78
D-73065	C-26269	02/19/78 - 03/15/78
D-73066	C-26270	03/15/78 - 04/07/78
D-73067	C-26271	04/07/78 - 05/01/78
D-73068	C-26272	05/01/78 - 05/25/78
D-73069	C-26273	05/25/78 - 06/18/78
D-73070	C-26274	06/18/78 - 07/12/78
D-73071	C-26275	07/12/78 - 08/05/78
D-73072	C-26276	08/05/78 - 08/29/78
D-73073	C-26277	08/29/78 - 09/22/78
D-73074	C-26278	09/22/78 - 10/16/78
D-73075	C-26279	10/16/78 - 11/09/78
D-73076	C-26280	11/09/78 - 12/02/78
D-73077	C-26281	12/02/78 - 12/26/78

D#	C#	TIME SPAN
D-74025	C-26509	12/26/78 - 01/19/79
D-74026	C-26510	01/19/79 - 02/12/79
D-74027	C-26511	02/12/79 - 03/08/79
D-74028	C-26512	03/08/79 - 04/01/79
D-74029	C-26513	04/01/79 - 04/25/79
D-74030	C-26514	04/25/79 - 05/19/79
D-74031	C-26515	05/19/79 - 06/12/79
D-74032	C-26516	06/12/79 - 07/06/79
D-74033	C-26517	07/06/79 - 07/29/79
D-74034	C-26518	07/29/79 - 08/22/79
D-74035	C-26519	08/22/79 - 09/15/79
D-74036	C-26520	09/15/79 - 10/09/79
D-74037	C-26521	10/09/79 - 11/02/79
D-74038	C-26522	11/02/79 - 11/26/79
D-74039	C-26523	11/26/79 - 12/20/79
D-74040	C-26524	12/20/79 - 01/13/80
D-73482	C-26525	01/10/84 - 02/03/84
D-73483	C-26526	02/03/84 - 02/26/84
D-73484	C-26527	02/26/84 - 03/21/84
D-73485	C-26528	03/21/84 - 04/14/84
D-73486	C-26529	04/14/84 - 05/08/84
D-73487	C-26530	05/08/84 - 06/01/84
D-73488	C-26531	06/01/84 - 06/25/84
D-73489	C-26532	06/25/84 - 07/19/84
D-73490	C-26533	07/19/84 - 08/12/84
D-73491	C-26534	08/12/84 - 09/05/84
D-73492	C-26535	09/05/84 - 09/29/84
D-73493	C-26536	09/29/84 - 10/22/84
D-73494	C-26537	10/22/84 - 11/15/84
D-73495	C-26538	11/15/84 - 12/09/84
D-73496	C-26539	12/09/84 - 01/02/85
D-73497	C-26540	01/02/85 - 01/26/85
*D-74041	C-26541	01/02/85 - 01/26/85
D-74042	C-26542	01/26/85 - 02/19/85
D-74043	C-26543	02/19/85 - 03/15/85
D-74044	C-26544	03/15/85 - 04/08/85
D-74045	C-26545	04/08/85 - 05/02/85
D-74046	C-26546	05/01/85 - 05/25/85
D-74047	C-26547	05/25/85 - 06/19/85
D-74048	C-26548	06/19/85 - 07/12/85
D-74049	C-26549	07/12/85 - 08/05/85
D-74050	C-26550	08/05/85 - 08/29/85
D-74051	C-26551	08/29/85 - 09/22/85
D-74052	C-26552	09/22/85 - 10/16/85
D-74053	C-26553	10/16/85 - 11/09/85
D-74054	C-26554	11/09/85 - 12/03/85
D-74055	C-26555	12/03/85 - 12/27/85
D-74056	C-26556	12/27/85 - 01/20/86
D-73060	C-26264	01/20/86 - 02/13/86
D-75291	C-26488	02/13/86 - 03/08/86
★ D-74297	C-26316	03/08/86 - 06/12/86
D-74298	C-26282	06/12/86 - 07/06/86

*DUPLICATE TAPE..SAME AS D-73497..

★ 40 Files and 6250 BPI

D#	C#	TIME SPAN
78806	27301	07/06/86 - 07/30/86
78807	27302	07/30/86 - 08/23/86
78808	27303	08/23/86 - 09/16/86
78809	27304	09/16/86 - 10/10/86
78810	27305	10/10/86 - 11/02/86
78811	27306	11/02/86 - 11/26/86
78812	27307	11/26/86 - 12/20/86
78813	27308	12/20/86 - 01/13/87
78814	27309	01/13/87 - 02/06/87
79651	27310	02/06/87 - 03/02/87
79652	27311	03/02/87 - 03/26/87
79653	27312	03/26/87 - 04/19/87
79654	27313	04/19/87 - 05/13/87
79655	27314	05/13/87 - 06/05/87
79656	27315	06/05/87 - 06/29/87
79657	27316	06/29/87 - 07/23/87
79658	27317	07/23/87 - 08/16/87
79659	27318	08/16/87 - 09/09/87
79660	27319	09/09/87 - 09/26/87

77-102B-04M
Document: see 77-102A-04Q

```
$NOP
$NOP
$NOP**********LIST OF GOUT1**********
$EXE TPLIST BS

INPUT PARAMETERS ARE:  AS FL=2=2 10

 TAPE NO.    1              FILE NO.    1
 RECORD    1                LENGTH    1000
 100 YR.DOY    SEC          ORBIT     CRAFT     BT        BX SC     BY SC     BZ SC     SDX       SDY       SDZ
     SDT       SDC          BX GSM    BY GSM    BZ GSM    BX DIP    BY DIP    BZ DIP    B         B/BO      BINT
     BXIM GSM  BYIM GSM     BZIM GSM  BINTEXT   BXIE GSM  BYIE GSM  BZIE GSM  NLAT GEO  NLON GEO  SLAT GEO  SLON
  GEO LONG GEO  LAT GEO      R         X GSE     Y GSE     Z GSE     X GSM     Y GSM     Z GSM     ZNS GSM   TILT
     L         LT           MLAT      SES       PHI       SPIN      SLNG GSM  SLT GSM   SLNG GSE  SLT GSE   VX G
SM   VY GSM    VZ GSM       V         DVX GSM   DVY GSM   DVZ GSM   DV        DX GSM    DY GSM    DZ GSM    DX G
SE   DY GSE    DZ GSE       DR        NMPX GSE  NMPY GSE  NMPZ GSE  MPS       NSX GSE   NSY GSE   NSZ GSE   SS
     EM22      EM23         EM32      EM33      IE11      IE12      IE13      IE21      IE22      IE23      IE31
     IE32      IE33         SE11      SE12      SE13      SE21      SE22      SE23      SE31      SE32      SE33
     QUAL                   ISEE MAGNETOMETER SUMMARY TAPE FROM UCLA-IGPP              CREATED - 16
MARCH 1985(58F10.2,4F10.5,7F10.2,2(3F10.5,F10.2),23F10.5)

                                0.00      0.00      0.00      0.00 999999.00 999999.00 999999.00 999999.0
0 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.
00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999
.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 99999
9.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 9999
99.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999
999.00 999.00000 999.00000 999.00000 999.00000 999999.00 999999.00 999999.00 999999.00 999999.00 99
9999.00 999999.00 999.00000 999.00000 999.00000 999999.00 999.00000 999.00000 999.00000 999999.00 9
99.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000
999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000
 999.00000 999.00000 999.000001977295.00  53340.00      1.00      2.00 999999.00 999999.00 999999.0
0 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.
00 999999.00 999999.00  45526.64      3.83  45758.97 -44635.63   9879.83   1983.00  45757.21 -44635
.50   9879.55   1947.41     40.90    120.00    -23.21    120.42    120.53    -21.09      1.05
-.86       .41      -.44      -.86       .18      -.57      -.52      -.26      1.38     23.21     -
32.71    145.19   -72.39 999999.00 999999.00 999999.00 999999.00 999999.00     -4.31     -9.22
  3.31     10.70   -.00953   -.00111   -.00185    .00977     8.12      7.80      .22      8.12
  6.96      3.54     11.26   -.59362    .54801   -.58933     -3.09   -.20748    .66615   -.71638
    .41    .90399    .42755   -.42755    .90399   -.87378   -.44617   -.19347    .48632   -.80166
 -.34762   0.00000   -.39784    .91746 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000
 999.00000 999.00000 999.00000 999.000001977295.00  53400.00      1.00      2.00 999999.00 999999.0
0 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.
00 999999.00 999999.00 999999.00  43831.49      3.21  44070.70 -43380.02   4955.38   5987.01  44065
.65 -43379.87   4955.24   5951.27     39.10    125.76    -21.59    125.60    125.76    -19.13
1.05       -.90       .31       -.44       -.90       .09       -.54       -.49       -.24      1.32
25.60    -30.50    148.74    -80.08 999999.00 999999.00 999999.00 999999.00 999999.00     -3.86
 -9.29      3.58     10.68   -.00901   -.00192   -.00114    .00929     7.57      7.71       .14
   7.57      6.91      3.42     10.80   -.65916    .43334   -.61459     -4.09   -.28593    .55219
 -.78315   -1.02     .90434    .42680   -.42680    .90434   -.87378   -.44618   -.19348    .48633
  -.80165   -.34762   0.00000   -.39784    .91746 999.00000 999.00000 999.00000 999.00000 999.00000
 999.00000 999.00000 999.00000 999.00000 999.000001977295.00  53460.00      1.00      2.00 999999.0
0 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.
00 999999.00 999999.00 999999.00 999999.00  41401.16      2.71  41638.80 -40462.40    716.61    9801
.57  41630.16 -40462.23    716.60   9765.66     39.10    125.76    -21.59    125.60    130.80     -1
7.03      1.06      -.93       .22      -.45      -.93       .01      -.50      -.46      -.22
  1.27     23.97    -28.08    151.70    -89.25 999999.00 999999.00 999999.00 999999.00 999999.00
 -3.39     -9.32      3.84     10.64   -.00835   -.00259   -.00044    .00875     7.04      7.57
```

D-65441
10/22/77 - 11/15/77

```
    .10       7.04       6.81       3.32      10.34    -.71181     .30757    -.63145      -5.01    -.35576
  .40925    -.84021      -2.51     .90470     .42605    -.42605     .90470    -.87377    -.44619    -.19348
   .48634    -.80165    -.34762    0.00000    -.39784     .91746 999.00000 999.00000 999.00000 999.00000
 999.00000 999.00000 999.00000 999.00000 999.00000 999.000001977295.00  53520.00       1.00       2.0
0 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.
00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00  38442.21       2.31  38670.77 -36285.56  -2585
.05  13118.84  38658.34 -36285.39  -2584.95  13082.74      39.10     125.76     -21.59     125.60     13
5.61     -14.85       1.07       -.96        .12       -.45       -.96       -.08       -.46       -.43
  -.20       1.23        .32     -25.50     153.88     -99.87 999999.00 999999.00 999999.00 999999.00 999
999.00     -2.93      -9.30       4.07      10.57    -.00757    -.00312     .00022     .00819       6.57
    7.40       .10       6.57       6.66       3.24       9.89    -.74919     .17479    -.63888      -5.82
  -.41005     .24069    -.87973      -3.94     .90505     .42530    -.42530     .90505    -.87376    -.44620
   -.19349     .48635    -.80164    -.34762    0.00000    -.39784     .91746 999.00000 999.00000 999.00000
 999.00000 999.00000 999.00000 999.00000 999.00000 999.000001977295.00  53580.00       1.0
0       2.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.
00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00  35172.41       1.99  35385.05 -31326
.92  -4840.43  15725.67  35368.73 -31326.75  -4840.24  15689.38      39.10     125.76     -21.59     12
5.60     140.19     -12.62       1.09       -.99        .03       -.46       -.99       -.17       -.42
  -.39       -.18       1.21        .64     -22.83     155.15    -111.54 999999.00 999999.00 999999.00 999
999.00 999999.00      -2.47      -9.25       4.27      10.48    -.00671    -.00349     .00082     .00761
    6.14       7.20        .14       6.14       6.46       3.18       9.46    -.77012     .03982    -.63666
   -6.49    -.44252     .05597    -.89501      -5.20     .90541     .42455    -.42455     .90541    -.87376
   -.44621    -.19349     .48636    -.80164    -.34761    0.00000    -.39784     .91746 999.00000 999.00000
 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.000001977295.00  53640.0
0       1.00       2.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.
00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00  31800.09       1.73  31991
.16 -26069.88  -6079.53  17516.72  31971.00 -26069.73  -6079.28  17480.22      39.10     125.76      -2
1.59     125.60     144.52     -10.38       1.11       -1.01       -.07       -.46       -1.01       -.25
  -.38       -.35       -.16       1.19        .94     -20.12     155.44    -123.49 999999.00 999999.00 999
999.00 999999.00 999999.00      -2.03      -9.16       4.44      10.38    -.00582    -.00372     .00133
   .00703       5.76       6.98        .21       5.76       6.24       3.15       9.06    -.77481    -.09254
   -.62539      -7.01    -.45002    -.13072    -.88340      -6.19     .90576     .42379    -.42379     .90576
   -.87375    -.44622    -.19350     .48637    -.80163    -.34761    0.00000    -.39784     .91746 999.00000
 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.000001977295.0
0  53700.00       1.00       2.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.
00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00  28500.62       1
.53  28667.56 -20933.43  -6445.49  18495.31  28643.70 -20933.29  -6445.19  18458.61      39.10     12
5.76     -21.59     125.60     148.61      -8.17       1.13       -1.02       -.16       -.45       -1.02
  -.34       -.34       -.31       -.15       1.19       1.22     -17.43     154.82    -134.81 999999.00 999
999.00 999999.00 999999.00 999999.00      -1.60      -9.04       4.59      10.26    -.00493    -.00381
   .00176     .00648       5.44       6.76        .31       5.44       5.99       3.14       8.68    -.76471
   -.21812    -.60634      -7.37    -.43397    -.30496    -.84774      -6.85     .90611     .42304    -.42304
    .90611    -.87375    -.44623    -.19350     .48638    -.80163    -.34761    0.00000    -.39784     .91746
 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000
0

 TAPE NO.   1              FILE NO.   1
 RECORD   2                LENGTH   10000
1977295.00  53760.00       1.00       2.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.0
0 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00  25402.
24       1.38  25545.00 -16222.23  -6145.12  18751.63  25517.73 -16222.12  -6144.80  18714.71      39
.10     125.76     -21.59     125.60     152.45      -6.02       1.16       -1.04       -.26       -.45       -
1.04       -.42       -.30       -.27       -.13       1.19       1.48     -14.78     153.47    -144.85 9999
99.00 999999.00 999999.00 999999.00 999999.00      -1.20      -8.89       4.71      10.13    -.00408    -
.00378     .00211     .00595       5.17       6.53        .43       5.17       5.74       3.15       8.34
  -.74214    -.33386    -.58117      -7.58    -.39947    -.45664    -.79492      -7.19     .90647     .42228
   -.42228     .90647    -.87374    -.44624    -.19350     .48639    -.80162    -.34761    0.00000    -.39784
    .91746 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000
 999.000001977295.00  53820.00       1.00       2.00 999999.00 999999.00 999999.00 999999.00 999999.0
0 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.
00  22582.46       1.25  22702.55 -12113.79  -5397.33  18426.36  22672.27 -12113.70  -5397.00  18389
.22      39.10     125.76     -21.59     125.60     156.07      -3.95       1.19       -1.05       -.35
  -.44       -1.05       -.51       -.25       -.23       -.11       1.20       1.72     -12.21     151.59    -1
53.37 999999.00 999999.00 999999.00 999999.00 999999.00      -.82      -8.73       4.80       9.99    -
.00328    -.00367     .00236     .00546       4.95       6.31        .57       4.95       5.48       3.17
   8.04    -.70984    -.43793    -.55167      -7.66    -.35301    -.58171    -.73280      -7.26     .90682
```

77-1028-0411
1140-4201-77
1140-1028-0411

REQ AGENT	ACQ. AGENT
BMW	SK

ISEE 1 & 2
MAGNETOMETER
MAGNETOSPHERIC B-FIELD WITH IMF,N,V,T

77-102A-04U
77-102B-04Q

This data set catalog for Magnetospheric Modeling consist of one tape. This tape is 9 track, 1600 BPI, EBCDIC with 1 file of data. This tape was created on an IBM 360 Computer.

D#	C#	TIME SPAN
D-80279	C-27580	10/24/77 - 12/28/81

UQ 1

77-102A-04U
77-102B-04Q

ISEE-I AND -2 DATA TAPE FOR MAGNETOSPHERIC MODELING

Nikolai A. Tsyganenko
Institute of Physics, Leningrad University

Mikhail V. Malkov
Polar Geophysical Institute, Apatity

December I4, I989

GENERAL INFORMATION

The tape contains average values of the magnetospheric magnetic field measured during the period October 22, I977 - December 30, I98I by the ISEE-I and -2 spacecraft, tagged (when available) with the corresponding values of the solar wind parameters taken from the Interplanetary Medium Data Tape (Couzens and King, I986). The tape has been generated from 64 summary tapes containing ISEE-I and -2 I-min averaged magnetic field data (Elphic and Herbert, I986).

The procedure of generating the tape included the following stages:

I. A crude selection and elimination of intervals when the spacecraft were outside the magnetosphere ~~or too close to the Earth (r<4Re)~~.

2. Subtraction of the internal geomagnetic field contribution from the total measured I-min averaged values.

3. Plotting the graphs of the external field GSM components and coordinates of the spacecraft along the selected segments of their orbits. A more accurate selection of intra-magnetospheric measurements by a visual inspection of the plots.

4. Averaging of the I-min data over ~0.5Re orbit segments.

5. Tagging of the average magnetospheric magnetic field values with the hourly averaged solar wind data and geomagnetic indices values for the corresponding time intervals.

The total number of records ('data points') on the tape is 3I,375.

Acknowledgement: The Summary ISEE Data Tapes with I-min magnetic field averages were provided by the World Data Center A for Rockets and Satellites.

References:

I. Couzens, D.A. and J.H. King. Interplanetary Medium Data Book, Supplement 3A, I977-I985, NSSDC/WDC-A-R&S 86-04a, I986.

2. Elphic, R.C. and H. Herbert. International Sun-Earth Explorer Magnetometer Summary Tape. Format and Contents. UCLA IGPP publication, May 6, I986.

See also N. A. Tsyganenko, Planet. Space Sci. 37, 1, 5-20, 1989 "A magnetospheric B field model with a warped tail current sheet"

UQ 3

The tape is single file, unlabelled, 9 track, Den=I600 bpi. The FORTRAN format is (80(22A4)), and the blocksize is 7040 bytes. Each record has the following structure:

Revised, as per Feb. 15, 1990 letter.

Word	Type	Meaning	Comments
I	R*4	YEAR	YEAR=77,78,79,80,8I (last two digits only)
2	R*4	DAY	Jan I = Day I
3	R*4	HOUR	HOUR=OO,OI,...,23
4	R*4	FLAG	The same meaning as in the King's tape
5	R*4	KP	Standard coding (for example, 23 corresponds to Kp=2+ and 37 to Kp=4-)
6	R*4	DST	Dst index in nanotesla
7	R*4	O.	Reserved for AE index values
8	R*4	O.	Reserved for AL index values
9	R*4	BXGSM	IMF Bx-component in GSM coord.
I0	R*4	BYGSM	IMF By-component in GSM coord.
II	R*4	BZGSM	IMF Bz-component in GSM coord.
I2	R*4	SIGMA	IMF vector standard deviation in nanotesla
I3	R*4	TEMP	Solar wind temperature in Kelvin degrees
I4	R*4	DEN	Solar wind density in cm-3
I5	R*4	VEL	Solar wind velocity in km/sec
I6	R*4	XSM	Average SM (solar magnetic) X coord.of spacecraft
I7	R*4	YSM	Average SM (solar magnetic) Y coord.of spacecraft
I8	R*4	ZSM	Average SM (solar magnetic) Z coord.of spacecraft
I9	R*4	TILT	Geodipole tilt angle in degrees
20	R*4	BXSM	Average magnetospheric BX (SM coord.), in nanotesla
2I	R*4	BYSM	Average magnetospheric BY (SM coord.), in nanotesla
22	R*4	BZSM	Average magnetospheric BZ (SM coord.), in nanotesla

Note:

I.The last physical block in the file contains several logical records of fill values (9999.), so that the block be of the same size as preceding ones.

2. The words No.4-6 and 9-I5 are copied directly from the King's tape (Couzens and King, I986).

See also: Fairfield, D.H., An evaluation of the Tsyganenko magnetic field model, JGR, 96, 1481-1494, Feb. 1, 1991

ISEE 1 #2
77-1024-044
77-1028-048

	297.	18.	1.	13.	-31.	0.	0.	0.1	1.6	-0.9	2.4	27605.	6.	337.	10.7	0.8	4.5	-1.8	1.5	0.8	21.2
...	297.	19.	2.	13.	-29.	0.	0.	-2.0	2.4	1.3	1.9	30631.	5.	341.	10.3	0.9	4.1	-2.5	2.7	0.1	23.9
77.	297.	19.	2.	13.	-29.	0.	0.	-2.0	2.4	1.3	1.9	30631.	5.	341.	9.9	1.0	3.7	-3.1	2.2	-0.1	19.6
77.	297.	20.	2.	13.	-25.	0.	0.	-2.6	2.9	0.7	0.7	35212.	5.	340.	9.6	1.1	3.4	-3.7	0.6	-0.3	17.5
77.	297.	20.	2.	13.	-25.	0.	0.	-2.6	2.9	0.7	0.7	35212.	5.	340.	9.1	1.2	3.0	-4.5	-0.8	0.3	15.6
77.	297.	20.	2.	13.	-25.	0.	0.	-2.6	2.9	0.7	0.7	35212.	5.	340.	8.6	1.3	2.7	-5.3	-0.9	0.6	13.9
77.	297.	21.	1.	17.	-22.	0.	0.	-1.3	3.6	-0.3	1.2	33595.	6.	341.	8.2	1.4	2.4	-6.1	-2.1	0.1	12.0
77.	297.	21.	1.	17.	-22.	0.	0.	-1.3	3.6	-0.3	1.2	33595.	6.	341.	7.8	1.6	2.1	-6.8	-2.8	-0.1	11.6
77.	297.	21.	1.	17.	-22.	0.	0.	-1.3	3.6	-0.3	1.2	33595.	6.	341.	7.3	1.7	1.8	-7.6	-2.3	-0.7	11.3
77.	297.	22.	1.	17.	-20.	0.	0.	0.6	2.9	-1.5	1.9	20807.	7.	351.	6.8	1.8	1.6	-8.4	-2.2	-1.3	8.3
77.	297.	22.	1.	17.	-20.	0.	0.	0.6	2.9	-1.5	1.9	20807.	7.	351.	6.4	1.8	1.3	-9.1	-1.2	-1.2	6.8
77.	297.	22.	1.	17.	-20.	0.	0.	0.6	2.9	-1.5	1.9	20807.	7.	351.	5.9	1.9	1.1	-9.8	0.1	-0.9	3.8
77.	297.	22.	1.	17.	-20.	0.	0.	0.6	2.9	-1.5	1.9	20807.	7.	351.	5.5	2.0	0.9	-10.5	1.6	-1.1	-0.2
77.	297.	23.	1.	17.	-18.	0.	0.	0.8	1.6	-0.7	1.8	22251.	12.	341.	5.0	2.1	0.7	-11.1	3.5	0.4	-4.6
77.	297.	23.	1.	17.	-18.	0.	0.	0.8	1.6	-0.7	1.8	22251.	12.	341.	4.5	2.1	0.5	-11.7	8.0	1.7	-10.5
77.	297.	23.	1.	17.	-18.	0.	0.	0.8	1.6	-0.7	1.8	22251.	12.	341.	4.0	2.1	0.3	-12.3	8.8	3.6	-20.0
77.	298.	2.	1.	17.	-8.	0.	0.	-0.1	-1.3	0.8	1.1	16432.	18.	349.	1.0	-4.0	1.4	-19.8	0.1	-12.9	-24.9
77.	298.	2.	1.	17.	-8.	0.	0.	-0.1	-1.3	0.8	1.1	16432.	18.	349.	1.4	-4.3	1.6	-20.2	1.3	-9.8	-16.1
77.	298.	2.	1.	17.	-8.	0.	0.	-0.1	-1.3	0.8	1.1	16432.	18.	349.	1.8	-4.6	1.7	-20.6	0.6	-2.6	-5.5
77.	298.	2.	1.	17.	-8.	0.	0.	-0.1	-1.3	0.8	1.1	16432.	18.	349.	2.3	-4.9	1.9	-21.0	0.1	4.4	1.4
77.	298.	3.	1.	3.	-9.	0.	0.	0.0	-2.2	-0.1	0.5	15728.	18.	350.	2.7	-5.2	2.1	-21.4	0.8	4.2	5.8
77.	298.	3.	1.	3.	-9.	0.	0.	0.0	-2.2	-0.1	0.5	15728.	18.	350.	3.1	-5.4	2.2	-21.8	2.8	2.0	8.6
77.	298.	3.	1.	3.	-9.	0.	0.	0.0	-2.2	-0.1	0.5	15728.	18.	350.	3.6	-5.6	2.4	-22.2	3.0	-0.0	10.4
77.	298.	3.	1.	3.	-9.	0.	0.	0.0	-2.2	-0.1	0.5	15728.	18.	350.	4.0	-5.8	2.6	-22.5	4.2	-0.2	13.6
77.	298.	4.	1.	3.	-11.	0.	0.	-0.3	-3.5	0.8	0.7	15728.	17.	349.	4.5	-5.9	2.7	-22.7	5.0	-1.1	15.8
77.	298.	4.	1.	3.	-11.	0.	0.	-0.3	-3.5	0.8	0.7	15728.	17.	349.	5.0	-6.0	2.9	-23.0	6.3	-2.3	16.8
77.	298.	4.	1.	3.	-11.	0.	0.	-0.3	-3.5	0.8	0.7	15728.	17.	349.	5.4	-6.2	3.1	-23.1	6.1	-3.3	16.0
77.	298.	4.	1.	3.	-11.	0.	0.	-0.3	-3.5	0.8	0.7	15728.	17.	349.	5.8	-6.2	3.3	-23.2	7.2	-5.1	15.0
77.	298.	5.	1.	3.	-10.	0.	0.	0.3	-3.6	1.1	1.2	17704.	18.	346.	6.7	-6.4	3.6	-23.3	11.4	-7.4	19.9
77.	298.	5.	1.	3.	-10.	0.	0.	0.3	-3.6	1.1	1.2	17704.	18.	346.	7.1	-6.4	3.8	-23.3	10.9	-5.8	25.3
77.	298.	6.	1.	7.	-11.	0.	0.	1.0	-4.4	1.1	0.9	14042.	17.	338.	8.3	-6.4	4.5	-22.7	14.6	1.5	23.7
77.	300.	5.	4.	33.	-10.	0.	0.	0.0	0.0	0.0	0.0	60764.	26.	352.	9.7	1.6	-0.3	-23.9	16.8	-3.2	67.8
77.	300.	6.	4.	33.	-11.	0.	0.	0.0	0.0	0.0	0.0	62497.	25.	349.	8.5	2.0	-0.5	-23.4	9.5	5.4	55.8
77.	300.	6.	4.	33.	-11.	0.	0.	0.0	0.0	0.0	0.0	62497.	25.	349.	8.0	2.1	-0.6	-23.1	10.0	6.1	45.0
77.	300.	7.	4.	33.	-7.	0.	0.	0.0	0.0	0.0	0.0	79673.	37.	357.	7.5	2.2	-0.6	-22.7	5.4	6.5	44.8
77.	300.	7.	4.	33.	-7.	0.	0.	0.0	0.0	0.0	0.0	79673.	37.	357.	7.1	2.2	-0.7	-22.3	5.9	7.8	41.4
77.	300.	7.	4.	33.	-7.	0.	0.	0.0	0.0	0.0	0.0	79673.	37.	357.	6.5	2.3	-0.7	-21.9	3.1	6.8	33.9
77.	300.	7.	4.	33.	-7.	0.	0.	0.0	0.0	0.0	0.0	79673.	37.	357.	6.1	2.3	-0.8	-21.4	0.5	6.4	28.6
77.	300.	8.	4.	33.	5.	0.	0.	0.0	0.0	0.0	0.0	86541.	64.	376.	5.6	2.4	-0.8	-21.0	-1.3	8.0	37.6
77.	300.	8.	4.	33.	5.	0.	0.	0.0	0.0	0.0	0.0	86541.	64.	376.	5.1	2.4	-0.8	-20.5	-3.8	7.5	38.7
77.	300.	8.	4.	33.	5.	0.	0.	0.0	0.0	0.0	0.0	86541.	64.	376.	4.6	2.3	-0.9	-20.0	-6.9	9.3	39.6
77.	300.	8.	4.	33.	5.	0.	0.	0.0	0.0	0.0	0.0	86541.	64.	376.	4.1	2.3	-0.9	-19.6	-11.9	10.0	50.8
77.	300.	8.	4.	33.	5.	0.	0.	0.0	0.0	0.0	0.0	86541.	64.	376.	3.6	2.3	-1.0	-19.1	-18.2	7.1	48.7
77.	300.	9.	5.	63.	-33.	0.	0.	0.0	0.0	0.0	0.0	0.	0.	0.	3.1	2.2	-1.0	-18.6	-27.0	3.0	35.7
77.	300.	13.	5.	57.	-64.	0.	0.	0.0	0.0	0.0	0.0	0.	0.	0.	3.0	-4.7	4.7	-7.6	82.0	25.9	12.6
77.	300.	13.	5.	57.	-66.	0.	0.	0.0	0.0	0.0	0.0	0.	0.	0.	3.3	-5.0	5.0	-6.9	67.8	-0.5	-3.8
77.	300.	13.	5.	57.	-66.	0.	0.	0.0	0.0	0.0	0.0	0.	0.	0.	3.6	-5.2	5.2	-6.2	80.8	18.0	18.8
77.	300.	14.	4.	57.	-75.	0.	0.	0.0	0.0	0.0	0.0	34096.	41.	360.	4.5	-5.9	6.0	-4.3	41.2	-46.8	-32.5
77.	300.	14.	4.	57.	-75.	0.	0.	0.0	0.0	0.0	0.0	34096.	41.	360.	4.9	-6.1	6.3	-3.7	51.8	-48.7	-46.2
77.	300.	15.	4.	50.	-97.	0.	0.	0.0	0.0	0.0	0.0	0.	0.	350.	5.2	-6.4	6.5	-3.2	21.1	-57.2	-39.0
77.	300.	15.	4.	50.	-97.	0.	0.	0.0	0.0	0.0	0.0	0.	0.	350.	5.5	-6.7	6.7	-2.7	13.3	-62.8	-28.4
77.	300.	15.	4.	50.	-97.	0.	0.	0.0	0.0	0.0	0.0	0.	0.	350.	5.8	-6.9	6.8	-2.4	8.1	-65.9	-22.7
77.	300.	16.	4.	50.	-102.	0.	0.	0.0	0.0	0.0	0.0	0.	0.	372.	6.3	-7.3	7.1	-1.9	4.4	-61.2	-17.3
77.	300.	16.	4.	50.	-102.	0.	0.	0.0	0.0	0.0	0.0	0.	0.	372.	6.8	-7.7	7.2	-1.7	3.6	-54.8	-12.9
77.	300.	17.	4.	50.	-95.	0.	0.	0.0	0.0	0.0	0.0	0.	0.	384.	7.5	-8.3	7.4	-1.7	9.5	-16.0	-11.7
77.	300.	18.	5.	67.	-102.	0.	0.	0.0	0.0	0.0	0.0	0.	0.	0.	8.1	-8.7	7.4	-2.0	8.2	-11.1	-14.5
77.	302.	15.	1.	23.	-39.	0.	0.	2.6	-3.6	0.9	4.6	125718.	10.	467.	8.4	1.5	2.8	-3.2	0.0	-3.8	41.7
77.	302.	15.	1.	23.	-39.	0.	0.	2.6	-3.6	0.9	4.6	125718.	10.	467.	8.0	1.6	2.6	-2.8	-1.9	-5.0	38.2
77.	302.	16.	1.	23.	-41.	0.	0.	3.4	-3.0	1.2	2.9	113629.	9.	465.	7.5	1.6	2.4	-2.6	-4.0	-5.1	32.5
77.	302.	16.	1.	23.	-41.	0.	0.	3.4	-3.0	1.2	2.9	113629.	9.	465.	7.1	1.7	2.2	-2.5	-5.6	-3.7	28.6
77.	302.	16.	1.	23.	-41.	0.	0.	3.4	-3.0	1.2	2.9	113629.	9.	465.	6.6	1.8	1.9	-2.4	-7.9	-7.2	26.6
77.	302.	17.	1.	23.	-40.	0.	0.	5.9	-1.2	2.1	2.4	104144.	8.	482.	6.1	1.8	1.7	-2.3	-8.4	-7.2	20.0
77.	302.	17.	1.	23.	-40.	0.	0.	5.9	-1.2	2.1	2.4	104144.	8.	482.	5.7	1.9	1.5	-2.3	-10.7	-7.5	14.3
77.	302.	17.	1.	23.	-40.	0.	0.	5.9	-1.2	2.1	2.4	104144.	8.	482.	5.2	1.9	1.3	-2.4	-11.2	-6.9	5.3
77.	302.	17.	1.	23.	-40.	0.	0.	5.9	-1.2	2.1	2.4	104144.	8.	482.	4.7	1.9	1.1	-2.4	-11.1	-7.4	-4.2
77.	302.	18.	1.	10.	-43.	0.	0.	7.6	-0.9	2.2	1.0	72642.	7.	494.	4.2	2.0	0.9	-2.6	-8.4	-6.0	-20.8
77.	302.	18.	1.	10.	-43.	0.	0.	7.6	-0.9	2.2	1.0	72642.	7.	494.	3.8	2.0	0.7	-2.7	-1.7	-0.8	-35.8
77.	302.	18.	1.	10.	-43.	0.	0.	7.6	-0.9	2.2	1.0	72642.	7.	494.	3.3	2.0	0.5	-2.8	6.4	6.8	-32.7
77.	302.	21.	1.	17.	-36.	0.	0.	4.1	-3.2	1.3	2.8	120380.	9.	466.	2.0	-5.9	2.2	-9.9	-0.6	12.8	-3.9
77.	302.	22.	1.	17.	-31.	0.	0.	-1.7	-4.7	0.7	3.0	94644.	9.	502.	2.3	-6.2	2.4	-10.6	-0.6	11.2	1.0
77.	302.	22.	1.	17.	-31.	0.	0.	-1.7	-4.7	0.7	3.0	94644.	9.	502.	2.7	-6.5	2.5	-11.3	0.3	8.9	8.4
77.	302.	22.	1.	17.	-31.	0.	0.	-1.7	-4.7	0.7	3.0	94644.	9.	502.	3.2	-6.9	2.6	-12.2	1.9	5.8	13.5
77.	302.	23.	1.	17.	-33.	0.	0.	5.8	-1.4	1.3	1.5	63006.	8.	457.	3.6	-7.2	2.7	-13.0	3.0	3.8	17.5
77.	302.	23.	1.	17.	-33.	0.	0.	5.8	-1.4	1.3	1.5	63006.	8.	457.	3.9	-7.4	2.8	-13.6	4.7	1.5	18.8
77.	303.	1.	4.	13.	-25.	0.	0.	0.0	0.0	0.0	0.0	95108.	10.	467.	7.6	-8.9	3.5	-20.4	1.8	-21.6	1.1
77.	305.	0.	1.	13.	-19.	0.	0.	5.1	0.1	0.9	1.6	34924.	7.	405.	9.1	0.3	0.7	-18.9	2.9	-1.1	27.6
77.	305.	1.	1.	13.	-21.	0.	0.	5.4	0.7	0.7	0.6	34389.	6.	404.	8.6	0.5	0.5	-19.7	4.3	-0.5	28.6
77.	305.	1.	1.	13.	-21.	0.	0.	5.4	0.7	0.7	0.6	34389.	6.	404.	8.2	0.7	0.3	-20.6	3.6	-0.2	25.6
77.	305.	1.	1.	13.	-21.	0.	0.	5.4	0.7	0.7	0.6	34389.	6.	404.	7.7	0.9	0.1	-21.1	2.2	0.6	22.0
77.	305.	2.	1.	13.	-21.	0.	0.	5.5	-0.5	0.5	0.9	38795.	6.	401.	7.2	1.1	-0.1	-21.7	2.2	0.7	18.6
77.	305.	2.	1.	13.	-21.	0.	0.	5.5	-0.5	0.5	0.9	38795.	6.	401.	6.7	1.2	-0.2	-22.3	4.5	1.4	16.1
77.	305.	2.	1.	13.	-21.	0.	0.	5.5	-0.5	0.5	0.9	38795.	6.	401.	6.2	1.4	-0.4	-22.8	5.0	2.2	13.1
77.	305.	2.	1.	13.	-21.	0.	0.	5.5	-0.5	0.5	0.9	38795.	6.	401.	5.7	1.5	-0.5	-23.3	6.8	3.7	9.0
77.	305.	2.	1.	13.	-21.	0.	0.	5.5	-0.5	0.5	0.9	38795.	6.	401.	5.2	1.6	-0.6	-23.7	8.0	5.2	2.7
77.	305.	3.	1.	3.	-19.	0.	0.	4.1	-1.8	1.4	0.8	42290.	6.	396.	4.7	1.7	-0.7	-24.0	8.9	7.1	-1.1
77.	305.	3.	1.	3.	-19.	0.	0.	4.1	-1.8	1.4	0.8	42290.	6.	396.	4.2	1.8	-0.7	-24.3	6.9	7.9	-9.1
77.	305.	3.	1.	3.	-19.	0.	0.	4.1	-1.8	1.4	0.8	42290.	6.	396.	3.7	[illegible]	[illegible]	[illegible]	4.1	8.3	-17.0

ZSEE 1+2 77-1029-044
77-102B-04Q

D-80279 C-27580
10/24/77 - 12/28/81

DUMP OF TAPE REDIN

INPUT TAPE REDIN ON MT1
DATA INPUT FS NF=1 SPE=1 1 2 SPE=1 LB T 2

FILE	1 RECORD	2	LENGTH	7	4 BYTES					
(0)	43400000	43129000	42800000	41100000	41000000	00000000	00000000	00000000	40170AED	41191EB8
(40)	C0E147AE	41270A3D	44[illegible]	41500000	43151000	41ABEAC8	4 D40FA0	41474000	C110BAL0	41175F83
(80)	41CF8A8B	4215E94C	42400000	43129000	42130000	41D00000	41D00000	C21D0000	00000000	00000000
(120)	C12 A3D7	41D5EB83	41117 14	411D999A	4477A710	41733333	4215A8D4	41A44000	43EC7FED	41 1EEE6
(160)	C12749C8	41255F6C	4021C000	42175E1F	4000000	40129000	42150000	41000000	41000000	C0100000
(200)	00000000	00000000	C122A3D7	41200B8F	411E70A4	41109999	4477A710	41533333	43154800	41 F4AB1
(240)	411 5E1F	413B8214	C1318000	41227A9C	C+1C3E24	4313A21C	424E0000	43129000	42140000	41900000
(280)	41D00000	C2190000	00000000	00000000	C12A3D71	41D8FEC	4 BAE14E	4 E1A3D7	44898000	41533333
(320)	43154666	41990173	4111A3D9	41371E2E	C1347A93	4 A+5C9E	C+5AEAE	42118700	424C0000	43129000
(360)	42140000	41200000	41000000	C2190000	00000000	00000000	C12A3D71	412EFFE0	40BAE148	4 3D7
(400)	44898000	41533333	43154666	41911881	4113A42A	42300657	C1467FF6	C+C3F2C4	40022CE5	43F98085
(440)	424D0000	43129000	42140000	41200000	41000000	00190000	00000000	00000000	C12A3D71	41 8FEC
(480)	40BAE148	4 BA3D7	44898000	41533333	43154666	41A32F4	41156E14	412B91F0	C1542D28	0425C6E0
(520)	40A178 8	41DEEDDC	424D0000	43129000	42130000	41100000	42110000	C2160000	00000000	00000000
(560)	C11547AE	413A6666	C+4F5C29	41300000	44633F41	4 5E6666	431F5C4	41834E00	41172E1	4 8A6
(600)	C161FF07	C1215E91	41C10C19	41C10C1E	42430000	47129000	42150000	41100000	42110000	C2160000
(640)	00000000	00000000	C11547AE	413A6666	C+4F5C29	41135C29	44833F80	415F666A	43155000	41702F1E
(680)	4118E143	4121E951	C1+D9707	C12663 7	C+1EA77A	41B97DF6	424D0000	43129000	42150000	41100000
(720)	42110000	C2160000	00000000	00000000	C11547AE	4 4F6666	C+4F5C29	41135C29	44833E80	41 56666
(760)	43155000	4174EC85	41118000	41106962	C179F315	01053957	C9B05E54	41842E14	424D0000	47129000
(800)	42160000	41100000	42110000	C2160000	00000000	00000000	00000000	410E3D71	C1178E1F	4115147B
(840)	44514700	41766666	4315F 0	41607EE7	41100370	01190287	C1812CE1	C1238E19	C114E711	4184C434
(880)	42400000	43129000	42160000	41100000	42110000	00140000	00000000	00000000	41999998	410 3D71
(920)	C117851F	411E1+7B	44 1470	41766666	4316F0 3	41663886	41108FA9	41154170	C191A80	C1137921
(960)	C112AEF5	4160496F	4240 0	43129000	42160000	41100000	42110000	C2140000	00000000	00000000
(1000)	4 999998	412E3D71	C1178 F	4115147B	44514700	41766666	431F5C29	41FED1F8	411ED87D	4111A897
(1040)	C19CB5FC	4 1A72E6	C0 3D0 6	4130C000	42400000	43129000	42150000	41100000	42110000	C2160000
(1080)	00000000	00000000	40999998	412E7D71	C1179B1F	411E147B	44514700	41766666	4315F0C4	41 76C75
(1120)	411FF9B1	40E854BE	C1474 9E	411EF50A	C1119F80	C+71D64	424D0000	43129000	42170000	411 7000
(1160)	42110000	C2160000	00000000	00000000	4 CF8C19	41191FB8	C 8C28F	4110D7 2	4 66EF	41 F3333
(1200)	43155000	414F661A	412 F 7	4 B 6873	C1+2 961	41389428	4963176	C14A9F91	424D0000	42160000
(1240)	42170000	41100000	42110000	C2120000	00000000	00000000	40CF5C29	41191FF8	C0E5C28F	4110 0A4
(1280)	44555E0	41683333	4 7 9	41 7 9	42114E11	4 23166	C1BBD618	41FFD66	41166691	C1187DAE
(1320)	42400000	43129000	42170000	41100000	42110000	00000000	00000000	00000000	40CF5C29	41191E68
(1360)	C0E5C28F	4110 7A4	44 6E8 0	41BB3333	431F8000	413FAD2C	41202855	40568000	C1C53F82	41900198
(1400)	413A076D	C213FEC4	42400000	43129000	42160000	41100000	42110000	C2180000	00000000	00000000
(1440)	BFCCCCCD	C1149 4	4 47A 1	4111E8E5	4 9	4 193555	431E0	4110 9714	C14 B665	41168840
(1480)	C213D004	401E79DC	C1CCD	C2180FE6	42400000	43129000	41200000	41100000	42110000	C18 0000
(1520)	00000000	00000000	BFCCCCCD	C114 4 1	4 D47AE1	4111E8E5	4 3555	42123333	431E0000	41168CF7
(1560)	C1479E2A	41193 DC	C2147 E	41153E1	C1936E7E	C1 1C6AE	424D0000	43129000	42150000	411 7000
(1600)	42110000	C18 0000	00000000	00000000	BFCCCCCD	C114 4 1	4 D47AE1	4111E8E5	4 3555	42123333
(1640)	431ED000	411D6BFE	C1+A43 8	4119 6C3	C214A2C8	4 98FAD	C1290F96	C1583F	424D0000	43129000
(1680)	412 6666	41100000	42110000	C1900000	00000000	00000000	BFCCCCCD	C1148000	40D47AE1	4111E8E5
(1720)	444 3D0	42133333	431F0	412 4489	C1407CBA	411F8770	C21F0F11	4222F9C	4146 E4C	411710EF
(1760)	424D0000	43129000	42140000	41100000	41900000	00000000	00000000	00000000	00000000	00000000
(1800)	C0199999A	407851EC	44 D7 D	4212 CCD	431 C 8	41 83FF1	C1527C 9	412120	C2156F4A	41 F8160
(1840)	4142AC42	415D698B	424D0000	43129000	42150000	41100000	42130000	C1900000	00000000	00000000
(1880)	000 0000	C1233333	C1999 A	4 78 1EC	44 D7	4 C04CCD	431FE	4138E9	C1E617 C	41C3D241
(1920)	C215CEDE	41201AF3	413 E	424 0	4135F9DF	424 0	43129000	41130000	42150000	C1900000
(1960)	00000000	00000000	00000000	C1233333	C0199999A	407851EC	443D7000	42124CCD	431EE000	41398440
(2000)	C1547AE	41268 B	C2160 0	413 7E97	EF5C29	4116E0C	4 0	4310	413	41
(2040)	41300000	C19				C1233333	C1999A	4 7851C	443D7	4124CCD
(2080)	431E0000	4145C716	C1EC1E 3	4129 710	C21E7E12	41 34EFB	C23FF0	4108D9	424 0000	4312A000
(2120)	414	411	C1E1	41	00000	C04 0F0	C1384	40C7AE14	41 5C28F	
(2160)	443D7 0	421 E666	431 D	4148 619	C1 C5F1	4120F361	C216EF5	414F3F	C111A4D9	41FCCC51
(2200)	424D0000	4312A000	41400	411	413	C1900000	00000000		C1A8	C138
(2241)	40C7AE14	41F5C28F	44 D7	421	431	41 5F1C6	C216	41	C1	41

```
(  2280)  C124D237  4211C4F5  4048[illegible]  431[illegible]  414[illegible]  41[illegible]  C1[illegible]  413[illegible]  C1[illegible]  [illegible]
(  2320)  C[illegible]  C138[illegible]  4[illegible]  41F[illegible]  44[illegible]  4[illegible]  41[illegible]  43[illegible]  41[illegible]  C1e29[illegible]  4171C151
(  2360)  C2172389  41612D22  C1[illegible]  421[illegible]  424[illegible]  4712A0[illegible]  414[illegible]  411[illegible]  413[illegible]  C1[illegible]
(  2400)  [illegible]  [illegible]  [illegible]  C13[illegible]  44[illegible]  4[illegible]  43[illegible]  421[illegible]  431[illegible]  41[illegible]
(  2440)  C165E4AD  41345435  C217[illegible]  417[illegible]  C151[illegible]  41[illegible]  42[illegible]  431[illegible]  41[illegible]
(  2480)  413[illegible]  C1A[illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  4[illegible]
(  2520)  4313A000  416B[illegible]  C1[illegible]  413A2F[illegible]  C2174F[illegible]  41[illegible]  C175[illegible]  4213E[illegible]  4[illegible]
(  2560)  415[illegible]  411[illegible]  [illegible]  C1A[illegible]  [illegible]  40428F[illegible]  C13A1[illegible]  41117[illegible]  4113C70A
(  2600)  4445528[illegible]  4211999A  43[illegible]  4171[illegible]  C1664[illegible]  [illegible]  C17[illegible]  414F[illegible]  C15C17[illegible]  4[illegible]
(  2640)  4240[illegible]  4312A[illegible]  41[illegible]  411[illegible]  417[illegible]  C1[illegible]  [illegible]  41[illegible]  4[illegible]
(  2680)  41123D71  48D9999A  44[illegible]  42111[illegible]  431[illegible]  41[illegible]  C16[illegible]  41477[illegible]  C216AC[illegible]  41[illegible]
(  2720)  4117AF88  4219A[illegible]  42[illegible]  43[illegible]  41[illegible]  [illegible]  [illegible]  [illegible]  [illegible]
(  2760)  [illegible]  [illegible]  [illegible]  [illegible]  44F[illegible]  [illegible]  43[illegible]  419[illegible]  4119E[illegible]  C [illegible]
(  2800)  C217E[illegible]  4214C[illegible]  C1[illegible]  42[illegible]  42[illegible]  43[illegible]  41[illegible]  41[illegible]  4[illegible]
(  2840)  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  44F421[illegible]  42193[illegible]  4[illegible]
(  2880)  411F939[illegible]  C[illegible]8173A[illegible]  C217[illegible]  41[illegible]  41[illegible]  42[illegible]  4[illegible]  [illegible]  [illegible]
(  2920)  42210000  C1B00000  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]
(  2960)  4315D4C[illegible]  4180AD7[illegible]  41214A[illegible]  C[illegible]  C217[illegible]  419[illegible]  41610[illegible]  4220[illegible]  424[illegible]  [illegible]
(  3000)  417[illegible]  414[illegible]  [illegible]  C17[illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]
(  3040)  4513739[illegible]  4204F333  43[illegible]  4178[illegible]  41[illegible]  C[illegible]  C215[illegible]  415[illegible]  4167[illegible]  [illegible]
(  3080)  424[illegible]  4312C000  417[illegible]  414[illegible]  420[illegible]  C17[illegible]  [illegible]  [illegible]  [illegible]  [illegible]
(  3120)  [illegible]  [illegible]  [illegible]  45137[illegible]  422[illegible]  431[illegible]  41700[illegible]  4123DC25  C0AD1[illegible]  C2164D1[illegible]  41[illegible]
(  3160)  417CA5BC  42297283  424[illegible]  4312C[illegible]  417[illegible]  414[illegible]  4[illegible]  C179[illegible]  [illegible]
(  3200)  [illegible]  [illegible]  [illegible]  [illegible]  4[illegible]  [illegible]  43164[illegible]  4168[illegible]  4124F[illegible]  C[illegible]
(  3241)  C21FDDCE  4131F508  41[illegible]  4221F[illegible]  42[illegible]  4312C[illegible]  417[illegible]  414[illegible]  42210[illegible]  C17[illegible]
(  3281)  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  45137[illegible]  4224F[illegible]  43164[illegible]  41[illegible]
(  3321)  41255[illegible]  C[illegible]  C215[illegible]  4[illegible]  [illegible]  C[illegible]  [illegible]  [illegible]  [illegible]  [illegible]
(  3361)  42210000  41500000  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  45152[illegible]  [illegible]
(  3401)  43177E66  4158F[illegible]  41[illegible]  C[illegible]  C214F[illegible]  C11[illegible]  418[illegible]  422591[illegible]  424D[illegible]  [illegible]
(  3441)  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]
(  3481)  4515[illegible]  423FE666  43177[illegible]  41[illegible]  41[illegible]  C[illegible]  C2147[illegible]  C1[illegible]  4177D[illegible]  [illegible]
(  3521)  4240[illegible]  4312C000  41[illegible]  414[illegible]  [illegible]  41[illegible]  [illegible]  [illegible]  [illegible]  [illegible]
(  3561)  [illegible]  [illegible]  45152[illegible]  423FE[illegible]  43177E[illegible]  41490A28  41258[illegible]  C0E[illegible]  C216[illegible]  C16DAAE4
(  3601)  41543[illegible]  42[illegible]  [illegible]  4312C[illegible]  41[illegible]  41[illegible]  42210[illegible]  41[illegible]  [illegible]  [illegible]
(  3641)  [illegible]  [illegible]  [illegible]  [illegible]  45[illegible]  [illegible]  43177E66  41414[illegible]  41[illegible]  C[illegible]
(  3681)  C2138E[illegible]  C1BF32[illegible]  419F71[illegible]  423[illegible]  424[illegible]  4312C[illegible]  418[illegible]  414[illegible]  4221A[illegible]  41[illegible]
(  3721)  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  45152[illegible]  423FE[illegible]  43177E66  41392E1
(  3761)  412451E8  C[illegible]B8428  C21319[illegible]  C215[illegible]  4171[illegible]  42[illegible]  42[illegible]  4312C[illegible]  41[illegible]  [illegible]
(  3801)  423F0[illegible]  C2210000  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]
(  3841)  [illegible]  4130FCCA  4123[illegible]  C11[illegible]  C212A[illegible]  C21EC112  41[illegible]  42[illegible]  424D[illegible]  4312C000
(  3881)  41D[illegible]  41[illegible]  42[illegible]  C24[illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]
(  3921)  [illegible]  [illegible]  [illegible]  412F[illegible]  C1[illegible]  [illegible]  C178DF[illegible]  42[illegible]  4219[illegible]  41[illegible]
(  3961)  424[illegible]  4312C000  41[illegible]  415[illegible]  423[illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]
(  4001)  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  41[illegible]  C14F[illegible]  414F[illegible]  C16[illegible]  [illegible]
(  4041)  C[illegible]8384B4  C13C35B3  424[illegible]  4312C[illegible]  41[illegible]  41[illegible]  [illegible]  C242[illegible]  [illegible]
(  4080)  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  41[illegible]  C152C868  4153C274
(  4121)  C16[illegible]A7E[illegible]  [illegible]  4211F[illegible]  421[illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]
(  4161)  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]
(  4201)  C15[illegible]829  416[illegible]F2F  C1[illegible]  40[illegible]  C[illegible]  [illegible]  [illegible]  4312C[illegible]  41E[illegible]  [illegible]
(  4240)  42390[illegible]  C24B[illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]
(  4281)  43168333  [illegible]  C1[illegible]  41[illegible]  C13[illegible]  [illegible]  C23[illegible]  C22[illegible]  42[illegible]  4312C[illegible]
(  4321)  41F[illegible]  414[illegible]  42[illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]
(  4361)  [illegible]  [illegible]  43[illegible]  415[illegible]  C1e[illegible]  41[illegible]  C12F789  42161[illegible]  [illegible]  [illegible]
(  4401)  42[illegible]  4312C[illegible]  41[illegible]  414[illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]
(  4441)  [illegible]  [illegible]  [illegible]  [illegible]  4[illegible]  [illegible]  +1[illegible]  C16B[illegible]  416B13[illegible]  C12B[illegible]  41[illegible]
(  4481)  C23EC8DC  C21C[illegible]  42[illegible]  43[illegible]  41[illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]
(  4521)  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  431[illegible]  41[illegible]  C16F5[illegible]  416D4A4[illegible]
(  4561)  C12[illegible]DCE  +181B[illegible]  C2[illegible]  C21[illegible]  [illegible]  [illegible]  4312C[illegible]  421[illegible]  414[illegible]  [illegible]  [illegible]
(  4601)  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]
(  4641)  C17[illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]
(  4681)  42320[illegible]  C266[illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]
(  4721)  43173E[illegible]  +16C1DF7  C1[illegible]  417[illegible]  C11[illegible]  41[illegible]  C23[illegible]  C1[illegible]  424[illegible]  43120[illegible]
(  4761)  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]
(  4801)  [illegible]  [illegible]  4317F[illegible]  417[illegible]  C1[illegible]  [illegible]  C11B3F[illegible]  41983[illegible]  C1FF6[illegible]  C16AD86C
(  4841)  424D[illegible]  4312C[illegible]  4212[illegible]  415[illegible]  424[illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]
(  4881)  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]
```

FILE 1 RECORD 392 LENGTH 2176 BYTES

Day 362 12/28/81

FILL